Board characteristics, audit committee attributes and firm performance: empirical evidence from emerging economy

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Abstract

Purpose – This study is designed and directed to analyze the effect of board characteristics and audit committee attributes on the firm performance of publicly listed commercial banks of Bangladesh.

Design/methodology/approach – Thirty publicly listed commercial banks of Dhaka Stock Exchange (DSE) have been taken as sample for this study. Data have been collected from annual reports between 2011 and 2017 of the assessed banks. Pooled OLS model has been used for running regression model of this study.

Findings – Board independence has a negative and significant relationship with ROA and Tobin's Q. However, Board Independence has a positive and significant relationship with Stock Return. On the other hand, Board Diversity has a negative and significant relationship with ROA and ROE, which implies inefficiency of diversified board members in the context of Bangladesh. Family duality has a positive and significant relationship with ROA and a negative and significant relationship with Stock return. Board Meeting has a positive and significant relationship with ROA. Audit Committee Size has a negative and significant relationship with Tobins' Q. Independence of audit committee chairman has a negative and significant relationship with Tobin's Q and Stock Returns. Presence of non-executive directors and number of audit meetings have no significant relationship with any of the predicted variables.

Research limitations/implications – Among all variables of the board characteristics, role of independent directors and participation of female directors have conflicting results in this study. This has raised a question about the fair appointment independent directors and their objective view on the board. Female directors' role is not convincing in the context of Bangladesh as most of the commercial banks are family-owned. Policymakers can tighten and supervise the appointment of independent directors to ensure good governance in the banking sector. Moreover, role of audit committee and independence of audit committee chairman have generated conflicting results in terms of market-based performance measure.

Originality/value – Banking sector of Bangladesh experiences huge corruption in the form of excessive NPLs and poor management quality which results in low profit for the firm. This study has explored the problems of management quality and flaws of audit committee which is hampering overall growth of banking industry. Improvement of independent directors' appointment and audit committee formation and reporting will certainly help banking industry of Bangladesh to improve overall performance.

Keywords Board characteristics, Audit committee attributes, Commercial banks, Bangladesh

Paper type Research paper

Erratum: It has come to the attention of the publisher that the article Fariha, R., Hossain, M.M. and Ghosh, R. (2022), "Board characteristics, audit committee attributes and firm performance: empirical evidence from emerging economy", *Asian Journal of Accounting Research*, Vol. 7 No. 1, pp. 84-96. https://doi.org/10.1108/AJAR-11-2020-0115, was originally published with the Appendix presented as supplementary material via external links; these have now been amended and the supplementary material is hosted alongside the article to ensure that it remains accessible in perpetuity.

1. Introduction

Trust is as essential a virtue as transparency is a key to performance. For an organization to run smoothly, it is important for the shareholders to be able to trust the managers while it is indispensable for the managers to be transparent on their journey to good performance. The mindset of financial investors in the economy may thus be heavily directed by a good corporate governance framework. A solid structure will encourage prospective investors to depend largely through the unwavering quality of a good corporate governance. It incorporates connections between, and responsibilities of the organization's stakeholders, just as the laws, policies, methods, practices, norms and standards may influence the organization's direction and control (Cadbury, 1992).

Financial institutions' stability serves as a blessing for an economy to develop sustainably. A vibrant banking system can ensure that the prioritized sectors are efficiently mobilized with funds. However, because of the intensifying growth of non-performing loans (NPLs), Bangladeshi banking system faces a serious problem. Growing NPLs generate doubts in the minds of depositors and they do not feel safe to deposit money in banks, leading to banks' financial distress. In fact, Bangladeshi banks have been suffering from intense liquidity crisis for the last few years. Investigations have shown that NPLs, low deposit growth and an increase in default loans are the main culprits behind this. This was made apparent in the country from a series of infamous scams throughout 2012 to 2018. Notables are the "Hallmark Scam" of 2012 when BDT 35,470 million were stolen from Sonali Bank, the embezzlement of Sonali Bank once again in 2013 amounting to BDT 45,000 million and the deceit of Crescent and AnonTex in 2018 which stripped Janata Bank of BDT 100,000 million. This inevitably prompted a look into the validity of credit supervision, credit assessment, management efficiency as well as board independence of the banks in Bangladesh (Ghosh *et al.*, 2020). And this growing culture of loan default mixed with corruption has scared the depositors (Uddin, 2019a). Out of the BDT 45,000 million swindled out of Basic Bank of Bangladesh, 95% loans were authorized by the board of directors between 2009 and 2013. More than 14 fraudsters of Basic Bank were involved with this activity including 8 businessmen, 1 surveyor and 5 higher authorities (Uddin, 2018). The tip of the iceberg for this liquidity crisis was Bangladesh Bank deciding to cap the interest rate to single digit (Uddin, 2019b). Bangladesh Bank has taken numerous steps to address this issue by rescheduling loan repayment and increasing tax on government saving certificates (Alo and Tuhin, 2019). But that has not abated the concerns of banking officials as they deem these policies prone to backfiring by resulting in an additional surge in loan default rate (Amin, 2020). By the end of June 2020, the default rate stood at 9.16% which was projected to surge further by the end of September 2020. This projection was done depending on the loan repayment waivers received upon borrower's default (Hossain, 2020). One instance is that faced by the Farmers Bank of Bangladesh, approved and established solely under political consideration and faced a loss of BDT 30,700 million due to loan scams. This bank had deposits amounting to BDT 46,730 million out of the entire distributed loans of BDT 53,100 million, of which up to 58% of the loans were defaulted (Alo, 2018).

According to Bangladesh Bank's recent financial stability report, 20 banks will fail to maintain the minimum capital adequacy required if even the top three borrowers defaulted their payments (Bangladesh Bank, 2019). This was especially concerning and Barua and Barua (2020) summarized it well. They concluded from their research that maximum banks in Bangladesh will face decreased capital adequacy ratio along with asset value and interest income, if RMG and SME sectors face any deceleration due to the impact of COVID-19. This is valid on the grounds that bank loans are heavily tied to the RMG and SME sectors. Even from the context of corporate governance, Khatun and Ghosh (2019) found board size has a positive and significant relationship with NPLs when it came to commercial banks. Their research found that sustainable profitability was not ensured for banks by the board members.

The poor quality of management was forcing banks to give loans on low collateral and without proper credit rating evaluation. According to the investigation by Central Bank into the Farmers Bank's defaulted loans, Chairman of the Board and Chairman of Audit Committee were found guilty (Hassan, 2019). The loss in interest income thus comes as no surprise as NPLs skyrocketed causing lower profitability.

When big name scandals such as Enron and Worldcom came into light, the need to inquire into boardroom discussions between officials and senior management catapulted. Bangladesh was no different as investors started to echo the voices of economists and corporate governance commentators who have long since been expressing uneasiness. Alo (2021) reported that three leading audit firms were accused by Bangladesh Bank Financial Intelligence Unit (BFIU) for helping Crescent group in cash incentive scam. This kind of news also put a question to the audit report quality issued by independent auditors. For instance, the Ruposhi Bangla branch of Sonali Bank was dubbed as a "low-risk" branch by the inspection of the internal audit committee during 2007–2011. However, parliamentary committee's investigation later found that the audit committee did not carry their role out honestly (Kamal and Begum, 2018).

A decent corporate governance structure reduces the possible outcomes of any power misconduct and leads to the reduction of capital spending. Therefore, this has a positive impact on the organization's economic efficiency as well as represents stock values more accurately. On that note, in this study we examined whether a high standard of corporate governance principles has any impact on return on asset, return on equity and return on stock of the company. The result of the report finds that there is a positive relationship between such a level of corporate governance standards and return on assets and return on equity (Akdogan and Boyacioglu, 2014). This discussion currently calls for the present framework to be broken down and the relations that are complexly maintained in an organization to be understood. Hence, the motives for this study are to contribute to this progressive discussion and reveal where Bangladesh falls right now under this particular scenario. The main purpose of this study is to figure out the effect of the board characteristic and audit committee attributes on the firm performance of the publicly listed Commercial Banks of Bangladesh. It has explored the effect of management quality and characteristics of the audit committee on firm performance. For widening the scope of investigation, firm performance has been divided into two categories – accounting-based performance measures (ROA and ROE) and market-based performance measures (Tobins' Q and Stock Returns). Both the methods are commonly used in accounting research for investigating role of different determinants on organizational profitability. Accounting-based performance measurements are predictors of short-term financial performance, whereas market-based performance measures are predictors of long-term financial performance (Alajlani, 2019).

The remainder of the manuscript is organized as follows. Section 2 outlines the literature review related to the study. Section 3 describes the research method including research design, sample, data analysis technique and measure. Section 4 presents the finding of this study and the interpretation of the results. Finally, some policy recommendations and limitations have been discussed in Section 5.

2. Literature review and hypothesis development
2.1 Board characteristics and firm performance
Sound corporate governance system can be ensured by a dynamic composition and formation of the board of directors. The board is the highest decision-making body to run the firm profitably. However, any kind of deviation or moral hazard problem by the board or board members will cause undesirable outcome for the firm and it may instigate the business to be bankrupt in some cases. As per the corporate governance code of Bangladesh, the board size of all publicly listed companies can range from 5 to 20 (BSEC, 2018). A larger board size

can bring difficulty for the companies because of lack of coordination among the members. Accordingly, the results of various studies and empirical analysis have shown that board size negatively impacts the bank performance (Staikaouras *et al.*, 2007; Fanta *et al.*, 2013; Liang *et al.*, 2013; Pathan and Faff, 2013). However, Muttakin and Ullah (2012) have shown that board size has a positive and significant relationship with the performance of banking companies in Bangladesh. Based on resource dependency theory, Muttakin and Ullah (2012) stated that larger boards facilitate with diversified knowledge and skills to firm which contribute to the operational excellence of the firm. Moreover, appointment of independent directors is very important in this aspect as well. Firstly, they can ensure more transparency for minority shareholders and lastly, they can assist to generate more profit for the business by providing valuable insights to the business (Khan *et al.*, 2013). Muttakin and Ullah (2012) found that board independence has a positive and significant relationship on the performance of Bangladeshi banks. Similar to these studies, when measured with Tobin's Q and ROA, independent directors and corporate performance showed a strong correlation in non-family firms (Saidat *et al.*, 2019). Additionally, competence of the board members can be enhanced by bringing diversity in the board. Inclusion of female director in the board is the way to do so. However, nomination of family members in the female directors position can seriously affect the firm performance. Muttakin and Ullah (2012) reported that female directors have no impact on firm performance of Bangladeshi banks as most of them are appointed based on family ties. Therefore, this leads to family duality problem in the board. Family duality is treated as a hindrance for ensuring good corporate governance. Srivastava and Bhatia (2020) argued that family duality has a positive and significant relationship with performance in the context of India. However, it might be different in the context of Bangladesh as corporate governance system is not very much enforceable here as most of the family-owned firms in Bangladesh may try to quest their own interest at the cost of minority shareholders. Finally, the board's persistence toward organizational commitment can be measured by board diligence. Board meeting is usually considered as a measurement of Board diligence. The frequency of board meetings has usually shown positive impact on bank performance (Liang *et al.*, 2013; Eluyela *et al.*, 2018). It is likely that more board meetings give more opportunity to the board to discuss organizational strategy in detail. Based on the above discussion, the following hypothesis and sub-hypotheses have been formulated:

H1. Board characteristics have significant impact on firm performance.

H1a. Board size has a positive and significant impact on firm performance.

H1b. Board independence has a positive and significant impact on firm performance.

H1c. Female directors presence has a negative and significant impact on firm performance.

H1d. Family duality has a negative and significant impact on firm performance.

H1e. Board meeting has a positive and significant impact on firm performance.

2.2 Audit committee attributes and financial performance
As per the Corporate Governance Code of Bangladesh, all the listed companies must have audit committee (Khan *et al.*, 2013). It is found that almost 50% of the listed companies do not have audit committee because of family dominance in the board (Muttakin *et al.*, 2015). However, Bangladesh Securities and Exchange Commission (BSEC) has highlighted the formation of audit committee with at least three members in the revised corporate governance code (BSEC, 2018). It is found that audit committee size has shown a significant positive impact on firm performance (Al-Matari *et al.*, 2014; Alqatamin, 2018). Being the first line of

defense in ensuring organizational transparency through financial statements, Audit committee must be formed with the experts who have knowledge in professional accounting and finance (BSEC, 2018). Al-Matari et al. (2014) concluded that audit committee structure has a significant positive effect on the firm performance. Hence, inclusion of non-executive directors in the audit committee is also considered as a mechanism for ensuring more accountability and wealth maximization of the firm.

Audit Committee diligence refers to the number of meetings attended by the audit committee members. Alqatamin (2018) argued that audit committee meeting frequency has shown no association with firm performance in the context Jordan and Oman. However, the meeting frequency has shown to have positive effects on the effectiveness of audit committees, which largely impact the firm performance (Sharma et al., 2009; Salloum and Gebreyal, 2014). Effectiveness of audit committee largely depends on the independence and quality of the audit committee chairman. As per corporate governance code, audit committee chairman must be an independent director who has knowledge of professional accounting (BSEC, 2018). Independence and expertise of the overall audit committee has proven to impact the firm performance of listed companies in Saudi Arabia and United Arab Emirates (Alzeban, 2020). Based on the above discussion, the following hypothesis and sub-hypotheses have been formulated:

H1. Audit Committee attributes have significant impact on firm performance.

H2a. Audit Committee Size has a positive and significant impact on firm performance.

H2b. Audit Committee Structure has a positive and significant impact on firm performance.

H2c. Audit Committee Diligence has a positive and significant impact on firm performance.

H2d. Audit Committee Head (Independence of Audit Committee Chairman) has a positive and significant impact on firm performance.

3. Research methodology
A quantitative strategy is utilized to research the impacts of corporate governance systems on performance of the company. The assessment and evaluation of the performance of the company are indicated by the secondary data accumulated from the annual report. This study aims to examine the effect of board attributes and audit committee attributes on the profitability of publicly listed commercial banks of Bangladesh. Detail research design and methodology of this study are as follows.

3.1 Sample selection
There are 30 commercial banks publicly listed on Dhaka Stock Exchange (DSE). All these publicly listed commercial banks have been taken as sample.

3.2 Data collection
Data have been collected from annual reports of assessed banks from 2011–2017. The data related to corporate governance was collected and used from the corporate governance disclosures and directors report in annual reports of the mentioned banks.

3.3 Model specification
Firm performance of an enterprise has been measured by two different categories with four variables. Accounting Based Performance indicator includes Return of Assets (ROA) and

Return on Equity (ROE). Whereas market-based performance indicator includes Tobins' Q and Stock Return. Board attributes include board size (B_SIZE), board independence (B_IDP), female directors (FEM_DIRECT), family duality (FAM_DUAL) and board meeting (BOARD_DILIGENCE). On the other hand, audit committee attributes include audit committee size (AC_SIZE), audit committee independence (AC_COMP), audit committee meeting (AC_DILIGENCE) and independence of audit committee chairman (AC_HEAD).

3.4 Models of the study

$$\text{ROA}_t = a + \beta_1\text{B\_SIZE} + \beta_2\text{B\_IDP} + \beta_3\text{FEM\_DIRECT} + \beta_4\text{FAM\_DUAL}$$
$$+ \beta_5\text{BOARD\_DILIGENCE} + \beta_6\text{AC\_SIZE} + \beta_7\text{AC\_COMP} + \beta_8\text{AC\_DILIGENCE}$$
$$+ \beta_9\text{AC\_HEAD} + \beta_{10}\text{Log\_Asset} + \beta_{11}\text{AGE} + e$$

(Model 1)

$$\text{ROE}_t = a + \beta_1\text{B\_SIZE} + \beta_2\text{B\_IDP} + \beta_3\text{FEM\_DIRECT} + \beta_4\text{FAM\_DUAL}$$
$$+ \beta_5\text{BOARD\_DILIGENCE} + \beta_6\text{AC\_SIZE} + \beta_7\text{AC\_COMP} + \beta_8\text{AC\_DILIGENCE}$$
$$+ \beta_9\text{AC\_HEAD} + \beta_{10}\text{Log\_Asset} + \beta_{11}\text{AGE} + e$$

(Model 2)

$$\text{Tobins'}\ Q_t = a + \beta_1\text{B\_SIZE} + \beta_2\text{B\_IDP} + \beta_3\text{FEM\_DIRECT} + \beta_4\text{FAM\_DUAL}$$
$$+ \beta_5\text{BOARD\_DILIGENCE} + \beta_6 AC\_SIZE + \beta_7\text{AC\_COMP}$$
$$+ \beta_8\text{AC\_DILIGENCE} + \beta_9\text{AC\_HEAD} + \beta_{10}\text{Log\_Asset} + \beta_{11}\text{AGE} + e$$

(Model 3)

$$\text{Stock Return}_t = a + \beta_1\text{B\_SIZE} + \beta_2\text{B\_IDP} + \beta_3\text{FEM\_DIRECT} + \beta_4\text{FAM\_DUAL}$$
$$+ \beta_5\text{BOARD\_DILIGENCE} + \beta_6 AC\_SIZE + \beta_7\text{AC\_COMP}$$
$$+ \beta_8\text{AC\_DILIGENCE} + \beta_9\text{AC\_HEAD} + \beta_{10}\text{Log\_Asset} + \beta_{11}\text{AGE} + e$$

(Model 4)

4. Results and analysis
4.1 Description statistics
Table 1 reports the descriptive statistics of the variables used in this study. The mean of ROA is 0.0078676 and the mean of ROE is 0.1107624. Mean value of accounting-based performance (ROA and ROE) indicators does not show a promising rate of profitability in the context of Bangladesh. Moreover, it is observed that few firms have also witnessed negative earnings in terms of ROA and ROE as minimum value of ROA and ROE are −0.0767 and −0.1894 respectively. The mean value of Tobins' Q is 0.994333 which lies in the standard value for firms with low quick ratio. However, few banks have negative Tobins' Q as the minimum value is −0.9600. The mean value of stock return is −0.1630952 which denotes the overall poor performance of banks in the stock market of Bangladesh. This also symbolizes weak regulation and performance of Bangladeshi Stock market. Most of the publicly listed commercial banks of Bangladesh has a board of 14 members. Notably, the minimum value of

Variables	Mean	Standard deviation	Minimum	Maximum
ROA	0.0078676	0.01046	−0.0767	0.0213
ROE	0.1107624	0.05036	−0.1894	0.2357
Tobins' Q	0.9943333	0.62381	−0.9600	4.24
Stock return	−0.1630952	0.23184	−0.8100	0.39
B_SIZE	13.75238	3.84702	5	22
B_IDP	2.133333	1.19861	0	8
FEM_DIRECT	1.142857	1.30826	0	5
FAM_DUAL	0.195238	0.39733	0	1
BOARD_DILIGENCE	19.60476	7.18258	9	44
AC_SIZE	4.176190	0.88171	3	5
AC_COMP	1.147619	0.91876	0	3
AC_DILIGENCE	9.704762	6.94534	3	41
AC_HEAD	0.761904	0.42693	0	1
Log_Asset	25.86248	0.63305	23.22	27.47
Age	17.03333	9.03072	3	34

Table 1.
Descriptive statistics

B_SIZE is 5. The mean value of independent directors in the board (B_IDP) is 2.133333 and minimum value is 0. This is a violation of corporate governance guideline of Bangladesh. The mean value of female directors (FEM_DIRECT) is 1.142857. But there are some banks as well where there is no diversity in the board. The average value of family duality (FAM_DUAL) 0.1952 which denotes more than 20% banks have family duality in the board. The mean value of Board meeting (BOARD_DILLIGENCE) is 19.60476 (minimum value is 9 and maximum value is 44). This signifies that board members are participating in ample of meeting to discuss organizational strategies and policies. Average number of audit committee members (AC_SIZE) is 4.176190 and minimum value is 3. The mean value of non-executive directors on the audit committee (AC_COMP) is 1.147619 (Minimum value is 0 and maximum value is 3). Moreover, the average number of audit meeting (AC_DILIGENCE) is 9.704762 and the mean value of independence of audit committee chairman is (AC_HEAD) is 0.761904. However, the minimum value of AC_HEAD is 0 which implies that independence of audit committee chairman is not maintained all firms.

4.2 Correlation

Table 2 summarizes the result of correlation of the studies variable. The interrelationship between studied variables has been examined by conducting Pearson correlation test. Correlation analysis also helps to detect multicollinearity problems among studied variables. Multicollinearity is a test to detect whether the independent variables are correlated or not. Having a high-level presence of multicollinearity indicates a collinearity problem in the data set. To test the multicollinearity first, the Pearson pair-wise correlation between the independent variables has been conducted. The results of the test in Table 2 demonstrate that there is no high degree of correlation among the independent variables. None of the correlation coefficients exceeds the acceptable value of 0.8 for a further statistical test (Farrar and Glauber, 1967). Moreover, we have also conducted the variance inflation factor (VIF) test and found that all the values are below the threshold of 10 (Hair *et al.*, 1995) (result reported in the Appendix), it proves that the study is free from multicollinearity problem.

4.3 Regression analysis

This study has been conducted to investigate the impact of board characteristics and audit committee attributes on the performance of Bangladeshi listed banking companies. Table 3 summarizes the results obtained from running regression models using Pooled OLS model. This regression results include two models of accounting-based performance and two models

	ROA	ROE	Tobins' Q	Stock return	B_SIZE	B_IDP	FEM_DIRECT	FAM_DUAL	BOARD_DILIGENCE	AC_SIZE	AC_COMP	AC_DILIGENCE	AC_HEAD	Log_Asset	Age
ROA	1.000														
ROE	0.3429*	1.000													
Tobins'Q	0.3905*	0.1547*	1.000												
Stock return	0.0846	0.1989*	−0.4257*	1.000											
B_SIZE	0.3489***	0.1137	−0.0366	0.0163	1.000										
B_IDP	0.1384***	0.1032	−0.1819*	0.4376*	0.2666*	1.000									
FEM_DIRECT	0.0176	−0.1520***	−0.0182	0.0218	0.0213	0.1098	1.000								
FAM_DUAL	0.0100	−0.1688*	−0.0256	−0.0500	−0.0809	0.1159*	0.3603*	1.000							
BOARD_DILIGENCE	0.2262*	−0.0199	0.0340	0.0160	0.2046*	0.0089	−0.0922	−0.1807*	1.000						
AC_SIZE	0.0484	−0.0827	−0.1482*	−0.0069	0.2414*	−0.1582*	−0.1007	−0.2352*	0.2211*	1.000					
AC_COMP	0.1503**	−0.0685	−0.0636	0.2710**	0.0862	0.2340*	0.0182	0.1173*	0.1872*	0.0209	1.000				
AC_DILIGENCE	0.0792	−0.0723	0.0512	−0.0219	0.2315*	0.2594*	−0.0433	0.1354*	−0.0355	−0.1360*	0.1358*	1.000			
AC_HEAD	0.0995	0.0642	−0.3486*	0.5866*	0.0047	0.3709*	−0.0502	0.0497	0.0519	−0.0660	0.2730*	0.0052	1.000		
Log_Asset	0.5783***	0.0735	0.1104	0.3329*	0.3683*	0.4662*	0.0521	0.0610	0.1852*	0.0783	0.3529*	0.2369*	0.2750*	1.000	
Age	−0.1299*	−0.1858*	−0.1464*	0.0806	0.0208	0.0372	−0.2009*	0.1075	0.1637*	0.2973*	0.1493*	0.0504	0.2701*	0.2365*	1.000

Note(s): ***, **, and * represent significance at the 1, 5 and 10% level, respectively

Table 2.
Correlation analysis

	ROA	ROE	Tobins' Q	Stock return
B_SIZE	0.000427*** (0.009)	0.00159 (0.119)	−0.0121 (0.301)	−0.00683* (0.068)
B_IDP	−0.00190*** (0.001)	0.00278 (0.425)	−0.118*** (0.004)	0.0486*** (0.000)
FEM_DIRECT	−0.000752 (0.101)	−0.00748*** (0.010)	−0.0246 (0.455)	0.00570 (0.588)
FAM_DUAL	0.00308** (0.049)	−0.0106 (0.279)	−0.0356 (0.752)	−0.0650* (0.071)
BOARD_DILIGENCE	0.000206*** (0.011)	−0.000268 (0.593)	0.00510 (0.377)	−0.00175 (0.342)
AC_SIZE	0.000190 (0.789)	−0.00501 (0.261)	−0.152*** (0.003)	0.0222 (0.174)
AC_COMP	−0.000638 (0.321)	−0.00466 (0.248)	−0.0232 (0.617)	0.0220 (0.137)
AC_DILIGENCE	−0.0000760 (0.365)	−0.000970* (0.066)	0.00198 (0.744)	−0.00264 (0.172)
AC_HEAD	0.00213 (0.142)	0.00944 (0.298)	−0.520*** (0.000)	−0.256*** (0.000)
Log_Asset	0.0113*** (0.000)	0.00943 (0.160)	0.372*** (0.000)	0.0538** (0.030)
Age	−0.000416*** (0.000)	−0.00122*** (0.006)	−0.00546 (0.280)	−0.00245 (0.129)
Constant	−0.285*** (0.000)	−0.0958 (0.560)	−7.132*** (0.000)	−1.769*** (0.004)
Observations	210	210	210	210
Adjusted R^2	0.468	0.095	0.219	0.426

Note(s): ***, **, and * mean significance at 1, 5, and 10%, respectively. p-value (in parentheses)

Table 3.
Regression results

of market-based performance which are affected by board characteristics and audit committee attributes.

Board Size (B_SIZE) has a positive and significant relationship with ROA ($\beta = 0.000427$, $p < 0.01$) which is consistent with the findings of Muttakin and Ullah (2012). Surprisingly, Board size has a negative and significant relationship with stock return ($\beta = -0.00683$, $p < 0.10$). These findings are consistent with the study of Ofodea (2017). However, the result is not compelling in the context of Bangladesh. As Board size is positively related with accounting-based performance but this performance is not reflecting in the market return which also signifies the low-quality performance of banks. This findings imply that board members are unable to make a positive impression on the mind of the investors of Bangladesh. Moreover, Board independence (B_IDP) has a negative and significant relationship with ROA ($\beta = -0.00190$, $p < 0.01$) and Tobin's Q ($\beta = -0.118$, $p < 0.01$). The result found is contradictory with the findings of Muttakin and Ullah (2012) and Saidat *et al.* (2019). This puts a question to the appointment and independence of independent directors of the board. This result denotes that independent directors are not performing as per the expectation of stakeholders. Hence, they can hardly contribute to the profit growth and corporate governance implementation in the context of Bangladesh. However, it has a positive and significant relationship with Stock Return ($\beta = 0.0486$, $p < 0.01$). This reveals shareholders faith on independent directors which is not satisfactory based on ROA and Tobin's Q.

Female Directors (FEM_DIRECT) have a negative and significant relationship with ROE ($\beta = -0.00748$, $p < 0.01$) which is consistent with the findings of Muttakin and Ullah (2012) and Ofoeda (2017). This depicts that female directors of the board in Bangladeshi listed commercial banks are not performing effectively in profit generation. It can be understood that most of the female directors of the board are coming from family which results in their inactiveness in the board. Family duality (FAM_DUAL) has a positive and significant relationship with ROA ($\beta = 0.00308$, $p < 0.05$) and a negative and significant relationship with Stock Return ($\beta = -0.0650$, $p < 0.10$). However, family duality has no significant relationship but negative association with other predicted variables. This reveals that family members association with banks causing lower performance in the context of Bangladesh. However, Board Meeting (BOARD_DILIGENCE) has a positive and significant relationship with ROA ($\beta = 0.000206$, $p < 0.01$). This glorifies the board members persistence in discussing organizational strategies and policies in the board meeting. However, this result is consistent with the Board size's significant relationship with ROA.

Audit Committee Size (AC_SIZE) has a negative and significant relationship with Tobins' Q ($\beta = -0.152$, $p < 0.01$). This result is consistent with the findings of Detthamrong *et al.* (2017) and Lin *et al.* (2006). This relationship raises a question about the effectiveness and inclusion criteria of the members in the audit committee. This result exposes that shareholders perceived trust on audit committee members is low. This is also validated by the relationship of audit committee structure and audit committee diligence. Presence of non-executive directors (AC_COMP) and number of audit meetings (AC_DILIGENCE) have no significant relationship with any of the predicted variables but they are negatively associated with the performance measures, which is not a good indicator of effectiveness of audit committee in banking industry of Bangladesh. Independence of audit committee chairman (AC_HEAD) has a negative and significant relationship with Tobin's Q ($\beta = -0.256$, $p < 0.01$) and Stock Returns ($\beta = -0.520$, $p < 0.01$). This signifies independence of audit committee chairman is significant in market-based performance of the listed commercial banks. This result also exposes the personal-level relationship of the audit committee chairman and the board. As most of the sampled firm has family orientation in the board, this proves the inefficiency of audit committee chairman in the board.

Two control variables have mixed results with predicted variables. Asset (Log_Asset) has a positive and significant relationship with all the performance variables except for ROE. AGE is negatively and significantly associated with ROA and ROE.

5. Conclusion

Good corporate governance can be ensured through qualified and decent characteristics possessed by the board. As an integral part of the board, audit committee plays a vital role in ensuring good financial reporting practices in the company. Growing culture of NPLs, financial scams and audit swindles have asked for investigating the management quality and effectiveness of audit committee of various financial institutions of Bangladesh. Hence, this study targets at the effect of management efficiency (board characteristics) and audit committee performance (audit committee attributes) on the profitability of the business. Conventionally measured accounting-based tools of firm performance are Return on Assets (ROA) and Return on Equity (ROE). Along with that, two market-based performance measures have been considered in this study to predict how management quality and performance of audit committee affect the profitability of business. This study also extends the study of previously researched context by adding audit committee attributes and market-based performance indicator in this study. Publicly listed 30 commercial banks of Dhaka Stock Exchange (DSE) have been sampled for the study. Pooled OLS has been used for predicting the relationship among predictor and predicted variables. The findings and analysis of the research show that the regression model used in this study confirms that there is a significant effect of corporate governance factors combined on performance of the company measured. Our findings reveal that all the board attributes are collectively significantly associated with the performance variables. However, all the variables of audit committee attributes are not found significant. Only audit committee size and independence of audit committee chairman are found to have significant relationship.

Presence of independent directors is not effective in the context of Bangladeshi companies as we found a negative and significant relationship of independent directors with performance which is contrary to the expected relationship. Moreover, female directors presence is not fruitful in the Bangladeshi companies as most of the family-owned firms have female directors in the board. Such kinds of presence of female directors in a family-owned business does not ensure and enhance quality of management which is reflected in this study. Audit committee size and independence of audit committee have a negative and significant relationship with Tobin's Q which is divergent from expected results. It means that audit committee and chairman of audit of audit are not performing up to the expectation of the stakeholders which result in poor performance in the market. In this study, different parts of rules and guidelines of corporate governance, its practices and the effects on the companies' performance in the Bangladeshi banking industry have been scrutinized and analyzed. Based on the analysis, certain discoveries have come out and a few proposals have been advanced to improve the circumstances prevailing in the arena of corporate governance and practices. Good corporate governance alone cannot make a company effective or successful. Companies need to offset corporate governance structure with key drivers of performance by taking and implementing strategic decision and risk management; this can be done through the productive and efficient utilization of organization's resources. Regulators and policymakers should also reinforce the existing laws and regulations so that every company complies with the relevant law and safeguard general investors wealth. Moreover, future research could provide an in-depth analysis using a lot more factors of corporate governance tools to get a more enhanced result.

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Appendix

Appendix document is available at: Appendix available in supplementary material to the article.

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